The Veterinary Record.

(Founded by William Hunting. F.R.C.V.S., 1888.)

No. 51. DECEMBER 17, 1927. Vol. 7.

What is Comparative Medicine? *

By O. Charnock Bradley, D.Sc., M.R.C.V.S.

Abstract.—Inasmuch as it includes the study of disease in a considerable number of animals belonging to widely different species, there is some ground for regarding veterinary medicine as being comparative medicine. But this is held to be too narrow an application of the term.

There is better reason for the contention that human and veterinary medicine together compose comparative medicine. Notwithstanding marked differences between some of the diseases of man and those of the lower animals, the similarities and resemblances are much more numerous. Human and veterinary medicine are confronted with similar problems and employ similar means for their solution; and, taken together, they deal with a large group of animals sufficient to justify the contention that they are two branches of one medicine. But an even wider and more comprehensive conception of comparative medicine is suggested. It is held to embrace the study of disease processes in all animals (and possibly in plants also), in all conditions, and with the help of all available means. Its corpus contains elements that have been contributed, and are being contributed, from widely different sources. The physicist, the chemist, the physiologist, and others make discoveries that are susceptible of incorporation; and thus is accumulated a store of linked facts from which practitioners of human and veterinary medicine take what they need, and taking, give.

. . . . . .

Though it would be difficult, if not impossible, to suggest a better adjective, it is unfortunate that "comparative" when used in conjunction with "medicine" is susceptible of a variety of interpretations, the interpretations depending upon the angle of the interpreter.

It is very unlikely that anyone will view the term from so narrow an angle, but it is just possible to claim that comparative medicine is that part of human medicine which takes into account individual, racial and other differences. Such an interepretation, however, need not be seriously considered.

But the supposition that comparative medicine is synonymous with veterinary medicine is worthy of a closer examination.

Veterinary medicine, in its early days, was concerned with only one or two animals. From the laws of Hammurabi we are to conclude that the ox and sheep where the only domestic animals that mattered in the third millennium B.C. This we have no difficulty in believing, for Babylon was a pastoral country. Nor are we surprised that, in a later age, writers in a country that enjoyed military fame (such as Rome) should have confined their attention almost exclusively to diseases of the horse. Veterinary science to-day, on the contrary, concerns itself with many different—and widely different—species. Ranging, as do the patients of the modern veterinary surgeon, from the horse to cage-birds, and including animals in all parts of the civilised world, veterinary medicine now deals with a wide variety of diseases with great diversity of manifestation. Some species suffer from diseases from which other species are free; the same disease manifests itself differently in different species; races even of the same species may enjoy an immunity denied to their kindred.

Veterinary medicine, then, affords ample scope for the institution of comparisons, and could advance sound reasons in support of the claim that it is comparative medicine.

But, it may be asked, why separate man from the rest of the mammalia? It is a fact that man suffers from diseases that do not affect the lower animals, and the lower animals suffer from diseases with which man is not afflicted; but, in general, disease processes are common to both, and not a few specific diseases are intercommunicable. Clearly, there can be no sufficient justification for the exclusion of human medicine from comparative medicine, and there is abundant warrant for regarding human and veterinary medicine as branches of a larger medicine.

Human and veterinary medicine have had a very similar birth and growth. Those confronted with problems in human medicine have never hesitated to go to the lower animals for illustrations and explanations, nor have writers on veterinary medicine been slow to make use of the theories and discoveries of human medicine. Both have been indebted to the same discoveries. Both are called upon to deal with like problems, and both employ like means for their solution. There has long been a measure of co-operation between human and veterinary medicine, and the co-operation has increased in a very remarkable manner in recent years. And, since the two branches of medicine, taken together, deal with a heterogeneous mob of animals, conspicuously different in anatomy, physiology and pathology, it seems as though there could be no sound reason for denying to them the collective title of comparative medicine.

My especial concern at the moment, however, is not to sustain the conception of a comparative medicine that embraces human and veterinary branches; for this, it may be concluded, was the inspiring factor in the institution of this Section of the Royal Society of Medicine. My purpose is rather to suggest that the term "comparative medicine" has an even wider and more comprehensive connotation. Permit the platitude that no corpus of knowledge has ever had a Minerva-like birth. There must, of course, have been some sort of initial germ, but the nurture and development of the germ have always depended upon contributions from a variety of sources; and, not infrequently, the source has been of no obvious relationship.

Medicine, using the term in its widest sense, has been no exception. It is a structure that has been gradually built out of material much of which has been imported; and importation, obvious throughout the edifice, is probably

*Address presented to the Comparative Section of the Royal Society of Medicine, October 26th, 1927.
Reprinted from *Proceedings of the Royal Society of Medicine*, Vol. xxi., No. 1, November, 1927.

most clearly evident in the foundations. Possibly one might be accused of straining facts to fit arguments were it asserted than an enthusiastic microscopist examining the scrapings from his teeth, was, in the seventeenth century, pursuing research that led to the revealment of a truth that is basal in modern medicine. Possibly this sounds fantastically and unnecessarily cryptic. The fundamental character of the work of Schwann and Schleiden, however, will be readily admitted, as will also the impossibility at the time of the promulgation of their "cell theory," of foreseeing the ultimate medical application and development of their discovery.

The discoveries of Leeuwenhoek and of Schwann and Schleiden have been chosen for the reason that we cannot conceive of medicine without bacteriology and pathology; and yet neither of the discoveries can be regarded as having been made initially in the interests of medicine.

It is impossible to predict when and where the results of research in any province of science may ultimately impinge on the problems of other workers. Every branch of science is liable to have its centre of gravity disturbed by additions to science elsewhere. In this connexion, contemplate the far-reaching influence of the work of Charles Darwin.

Of no discovery can the ultimate result be predicted, and conversely it is impossible to foresee what provinces of science may not have to be laid under tribute in the search for any truth. It is stated that in the course of a piece of research being conducted at present, the investigators sought help, in the first instance, of the physiologist. They then went to the biochemist for information. The plant pathologist was asked what assistance he could furnish, and this led directly to the soil analyst. Geology, therefore, was asked to help the pathologist. And, the problem having a bearing on surgery, the human surgeon could not be left out of the inquiry.

A similar story could be told of a current investigation into a disease of horses. The clinician has furnished data to the pathologist, who has sought help from the mycologist, the pharmacologist, the botanist and the specialist in medicine, and will apparently require to consult the soil specialist and the meteorologist.

The daily work of the medical man and the veterinary surgeon is essentially of an analytical character, and the minute analytical method is not without its dangers, inasmuch as it may easily lead to unbalanced and unwarranted conceptions and a false and distorted perspective. It is apt to weaken or even destroy a sense of unity. It is but human to busy ourselves with the relationship of things to us, rather than with the relationship of things to each other. It is unquestionably easier to analyse than to synthesize. No attempt is being made to belittle a properly controlled analytical method. To do so would be unwarranted and absurd. All that it is sought to postulate is that the detailed analytical method, to produce results of lasting value, must be checked and controlled by as extensive a general survey as is permitted by existing knowledge.

The corpus of comparative medicine, like that of human medicine and veterinary medicine, contains elements contributed from widely diverse sources; and the body grows. The physicist, without thought of the ultimate application of his discoveries, exposes a truth that throws light into the dark places of function, normal or abnormal. The chemist gives a hint; the biologist expounds a law; the morphologist, the physiologist, and others state some fact that is of service to the pathologist; and so on. Thus is accumulated a store of linked, ascertained facts from which the practitioners of human and veterinary medicine take what they need as they go on their lawful occasions. And, let it be added, the practitioner, taking and using, also contributes.

If we so regard comparative medicine, and hold also that it embraces the study of disease processes in all animals (and possibly plants as well), in all conditions and with the help of all available means, it is clear that it is an instrument for the proper comprehension in true perspective of the problems of human and veterinary medicine. It should furnish means for the recognition and distinction of the Aristotelian "essence" and "matter"; "essence" being a cause of uniformity, "matter" a cause of accident. With little reservation, we may look upon comparative medicine and applied medicine as standing in the same relationship to each other as do pure science and applied science. Just as it may be impossible to foresee the time and place, or the degree of the application, of the truths of pure science, so it may be difficult or impossible to predict when and where or in what measure the ascertained facts of comparative medicine may form part of the body of applied medicine. And just as the details of applied science may have had origin in investigations and discoveries that initially carried no hint of their final applicability, so the origin of medicine that comes to be applied may appear to be of little or no promise. In illustration of what is here meant, probably nothing better could be adduced that the life work of Louis Pasteur. His work at first carried with it not the smallest semblance of an adjunct to medicine, and it progressed for a long time without direct application to veterinary medicine, and even longer before it touched human medicine.

In brief, on the present occasion, you are asked to conceive of comparative medicine as a storehouse, be the provenance of its contents what they may, from which human and veterinary medicine may choose such things as are of possible application; and they, taking, give.

Discussion.

Dr. P. Manson-Bahr, speaking of the close association of comparative medicine with the study of tropical medicine said that Pasteurism led to Listerism and Listerism in turn to what one might term Mansonism.

In tropical medicine one saw an excellent example of the part which man has played in the scheme of evolution. Through countless æons, man in the tropics had been closely associated with lower animals, hence they were both the victims of the same afflictions which affected them in different ways. Here we saw the interdependence of lice, fleas, mosquitoes, flies, crabs, rats and even snakes, frogs and armadilloes with man. Thus in process of time many wild animals have come to act as reservoirs of disease germs which are pathogenic to man. Although all these reservoir hosts have not been discovered, there probably exist animal hosts of malaria, amœbic dysentery and yellow fever.

He (the speaker) was glad to see that recently the close relationship of veterinary science, human medicine and agriculture had been recognised by the British Government in setting up expert committees to co-operate under the ægis of the Medical Research Committee.

Dr. H. H. Scott said there seemed to be not a little confusion as to the term "comparative pathology." The human pathologist was inclined to limit it to the diseases of animals communicable to man, and vice versa; the veterinary to these in part, but more to the way in which morbid agents affected different species of domesticated animals; in his (the speaker's) opinion its domain was more extensive than either or both of these.

In a wide sense, comparative pathology should have in view morbid conditions affecting all beings from the lowest unicellular organisms to the highest; it should, therefore, theoretically include the study of vegetal as well as animal tissues, and thereby aim at discovering what was common to all living cells and what was peculiar to some.

This, of course, was not possible at present, because there were so many gaps in our knowledge. The difficulties of codifying and of correlating even what we did know were great enough, but, to mention only a single point, were rendered even greater than they need be, because in studying animal diseases we too often tried to adapt descriptions of human pathological conditions to diseases of lower animals. Thus, the same terms were applied to differing widely conditions. He would give two or three examples:—Chorea: In animals this was a term ascribed to local muscular twitchings, though they might be uniform in distribution, in intensity, and in rhythm. Often these had as a basis definite organic lesions. They bore practically no essential resemblance to human chorea. Typhoid and influenza were others; both these names were given to a disease in horses caused by a filtrable virus, not associated with Eberth's bacillus, as in man; nor were the symptoms in the least like those of human typhoid, a disease to which no other animal appeared to be subject; nor, again, had it anything in common with human influenza.

Typhus in horses had for a synonym, purpura hæmorrhagica, and was a non-contagious disease; in man typhus was a deadly infection, with the louse as the vector of the virus. Canine typhus—"maladie de Stuttgart"—was a hæmorrhagic enteritis whose causation was unknown, possibly it was one of the pasteurelloses; at all events it was not at all like human typhus. Cholera was another much-abused term; in man an acute and very fatal disease due to the growth of Koch's comma vibrio and absorption of the toxins which it elaborated. Fowl-cholera was due to the *Bacillus aviscepticus*, and cases might even become chronic; hog-cholera was due to a filtrable virus. So the term cholera might be whittled down to mean one symptom—profuse diarrhœa of a watery character. Nevertheless human subjects might die, overwhelmed by the intensity of the toxin, before the diarrhœa had had time to develop; then we got out of the difficulty by calling it "cholera sicca."

Examples might be greatly multiplied, but one more must suffice. Let us take diphtheria. In the case of diphtheria, human medicine had restricted what might be met with in a number of conditions to an infection with the Klebs-Löffler bacillus, which was really not fair. Nor did we escape from the difficulty by designating the others "diphtheroid" states. In calves, the diphtheria was due to the *Bacillus necrophorus* of Bang; pharyngeal diphtheria in hogs might be a symptom of hog-cholera in which the *Bacillus necrophorus* and the *Bacillus suipestifer* might be found; avian diphtheria was a synonym of fowl-pox or chicken-pox, one of the animal poxes but having no connexion with the Klebs-Löffler bacillus, while its synonym "chicken-pox" was misleading to students of human medicine, because it had nothing to do with varicella, human so-called "chicken-pox."

Passing to another point: workers in comparative medicine should not omit the study of the habits of animals and their effects in predisposing them to certain classes of disease. Thus, wild animals were less liable to infections and intoxications, more liable to trauma than domesticated animals; domesticated animals were exposed to the same pathogenic agents as was man, but they often reacted very differently towards such agents; to some they were insusceptible, *Bacillus typhosus* for example. Fractures healed, or should heal, as in man, but in small animals they often did so without even the aid of bandages or splints. Though animals were exposed to injury—often severe—syncope and traumatic shock were rare in them; in wild animals very rare.

Tetanus, an infection common to man and animals, might be cited as an example of widely varying susceptibility to toxin; thus, the horse was very susceptible, whereas, weight for weight, six times the amount was needed for a guinea-pig, twelve for a mouse, twenty-four for a goat, 500 for a dog, nearly 2,000 for a rabbit, 6,000 for a cat, 12,000 for a goose, 48,000 for a pigeon, and 360,000 for a hen. Suppuration, common in man and the horse, was, he believed, less common in the sheep and the pig, rarer still in the dog and cat, and quite uncommon in birds. Why should there be such apparent discrepancies? It was part of the work of the comparative pathologist to try to find out.

Jumping to conclusions, a fault which human pathologists sometimes commit, might find a wholesome check in the studying of animal diseases. Recently, in the Zoological Gardens they had had a case of carcinoma of the tonsil in a wolf. On looking up the literature, he (Dr. Scott) had found that syphilis was noted to be very frequent in human cases of this affection, one author claiming that the proportion was 100 per cent., and that syphilis was an, if not the, essential cause of carcinoma of the tonsil. Another author held that excessive smoking was a cause in 75 per cent., caries of teeth in 50 per cent. (the last was, at least, a common concomitant of all diseases where the average age of persons attacked was fifty-five years). Yet another held that the taking of hot food, combined with excess of salt in the diet, was the main cause.

The wolf had had excellent teeth, had shown no signs of having had syphilis (unless the carcinoma of the tonsil itself was a sign), had been five years in the Gardens and had not indulged unduly in tobacco, did not have its food too hot, and did not eat excess of salt.

Finally, diseases might be peculiar to one or more species of animal, owing, it was stated, to the fact (!) that "certain agents pathogenic to one did not find in others a soil suitable to their development." This was no explanation, it was mere tautology. It was the task of comparative pathologists to discover the reasons and thereby aid the susceptible to overcome their susceptibility.

Dr. A. Leslie Sheather said that it was increasingly difficult to get a general survey of the subject of pathology because the number of workers was increasing and each of these was busy cutting up the subject into smaller interlocking pieces. What were regarded as basic facts twenty years ago were so no longer.

[Dr. Sheather then spoke of the discovery by Bruce of a malarial plasmodium in the duiker and his own recognition of malarial parasites in two buffaloes in India.]

Dr. W. M. Feldman said that the racial aspects of medicine had not hitherto received from this Society the attention they deserved. To take an example or two. Different races showed different susceptibility to various diseases or drugs. For instance, diabetes was much commoner among Jews than among Gentiles. Amaurotic family idiocy was mainly, if not entirely, confined to Jewish infants; on the other hand tuberculosis, though it occurred quite as commonly in Jews as in Gentiles, was not nearly so fatal in the former people as in the latter. A particular kind of endarteritis obliterans, about which Dr. Parkes Weber had written a great deal, occurred only in Polish Jews and in nobody else.

Alcoholism, again, was practically unknown among Jews, although there was reason to believe that they consumed a considerable quantity of alcohol. In other words, the Jews were sober though not necessarily temperate. The distribution of cancer was different in Jews; that uterine cancer was exceedingly rare amongst them. Again, of a number of people of the same race exposed to the same dose of toxin (*e.g.*, influenza), some would contract the disease and others would not. What was the cause of

(Continued at foot of first column next page.)

Animal Husbandry and Public Health.*

(LIVE STOCK INSURANCE)

By J. T. SHARE-JONES, D.V.Sc., M.Sc., F.R.C.V.S.,
Director of Veterinary Studies, University of Liverpool.
Chairman of Health Committee, Wrexham District.

Last year it fell to my lot to review, on behalf of a well-known publication, the progress made by Veterinary Science during the past 15 years. On close investigation, amongst many striking features that emerged the one that impressed me most was the rise in some countries of the subject of Animal Husbandry. Whilst this was so in the United States of America, in South Africa, in Switzerland, and even Roumania and Peru, the same could not be said of Great Britain. In many foreign universities, for example, chairs are devoted to several divisions of the subject, such as swine husbandry, cattle husbandry, etc.; but in Great Britain, which is regarded as the greatest live-stock producing country in the world, there is not a single Chair in Animal Husbandry in any of her universities.

Yet it would indeed be difficult to estimate the value of the domestic live stock to the human race. I remember reading an article written some time ago by a well-known journalist in which he claimed that next to winning the war the problem of supplying an adequate quantity of pure milk that could be sold at a reasonable price was the greatest of the day. This was a stupendous claim to make and, even if we grant that it is somewhat exaggerated, I fear the general tendency is in the other direction and that the nation as a whole has but a faint conception of its dependence upon this essential commodity in its efforts to maintain a reasonable standard of life.

One would almost feel inclined to place our meat supply as second in importance only to milk; then there are our supplies of bacon, butter, cheese and raw materials for leather and woollen goods, etc. A moment's reflection will remind us of our utter dependency upon these supplies—supplies which are, and in the present state of knowledge can only be, derived from one source, namely, the domestic animal.

Yet although we are, as stated, the greatest animal producing country in the world, we import for our own consumption:—

54%	of our beef and veal.	82%	of our butter.
59%	,, ,, mutton and lamb.	68%	,, ,, cheese.
65%	,, ,, meat derived from the pig.	54%	,, ,, milk and milk products.

Our total meat supplies produced at home in 1913 were 59% of our consumption. Two years ago they were 48%.

The manner in which we have allowed ourselves, apparently unwittingly, to drift into this position of dependency upon abroad came as a shock to most people interested in this question during the Great War. Our position would be bad enough were conditions abroad to remain stationary. But such is not the case, and a striking illustration of this is given by Sir Daniel Hall in an unusually well-informed article on the world's food production in relation to the population, in which he claims that such are the conditions in the United States of America that the time is not far distant when they will become competitors with us for the animal products of the Argentine and New Zealand rather than the greatest exporters of these as at present. He claims that the effect of this would probably be first felt in our meat supplies.

Altogether apart, therefore, from any consideration of our fiscal policy, which it would be improper to introduce New Zealand rather than the greatest exporters of into discussion in a conference such as this, we must recognise that an economic situation is likely to arise that will demand from us a markedly increased production of the commodities provided by domestic live stock.

The relationship of these supplies, adequate both in quality and quantity, to our national standard of health is generally recognised. The great war and such recent upheavals as widespread strikes have demonstrated quite clearly that those concerned with the nation's health must be concerned with the nation's food. Hitherto those interested have been chiefly concerned with the question of inspection, and some progress has been made in this work during recent years.

Diseases communicable to man through food consumption have been assiduously studied in man and the lower animals, and the contribution which has thus been made to preventive medicine is by no means inconsiderable.

But the question of the production of supplies has received scant attention, though I feel proud to say that I was instrumental in securing the introduction of the subjects of Meat and Milk Production for the first time into the ordinance for a Degree in a British University.

It will be obvious from what has been said that the matter cannot be allowed to remain where it is. Not only will the nation demand that the necessary commodities be provided, but it is an urgent national need that they be produced in adequate quantity and quality and purchasable at prices within the means of the workers. To produce these necessaries of life more cheaply than they are produced at present would make an invaluable contribution towards the destruction of that vicious circle—from which all are so anxious to extricate our people—the high cost of living.

The medical man and veterinary surgeon are both involved. The medical man prescribes the supplies and indicate their use both to the nation and to the individual client. The veterinary surgeon protects and develops the source of supply. Both were equally concerned in the protection of the supplies in their transit from the producer to the consumer. It is not therefore for one to try to exclude the other.

*A Paper read at The Ghent Congress, 1927, of the Royal Institute of Public Health. Reprinted from 16th October, 1927, issue of *The Journal of State Medicine* (Vol. XXXV, No 10).

(*Continued from previous page*).

such a differential immunity or susceptibility? Digitalis given to one patient would work wonders, in another of the same type it would have very little effect. Some time ago, in a case of dropsy that had not responded to usual treatment he (the speaker) had prescribed theocin with miraculous results; in another case, practically identical, the drug had had no effect. The number of examples could be very greatly multiplied, and a paper read before this Section on the racial aspects of disease would in his (Dr. Feldman's) opinion, be acceptable and instructive.

But there is another—the all-important party in production—to be considered: the breeder and feeder of the stock. He is the man to whom scientists should offer their help. It is for us to formulate and direct our own endeavours so as to make the hazardous work of these gentlemen as smooth as possible.

The greatest menace to animal husbandry to-day is the risk the individual engaged in it is required to carry. It is so real that large numbers of potential and eligible stock rearers decline to accept it and pass into other spheres. Here we have a huge commodity representing an estimated capital value of no less than £450,000,000 and carrying the gravest risks practically uninsured.

It is for us to consider seriously whether we can in the national interests make any substantial proposals to assist in the development of this industry.

As Chairman for many years of a large Local Health Authority and, furthermore, as one interested professionally in the question of the prevention of disease, there is one matter which has much impressed me during the past few years, and it is as to whether, when Regulations are formulated or even legislation promulgated, having for their ultimate object the eradication of some particular disease in the lower animals, sufficient, if any, regard is paid to the economic effect of such regulations upon the consumer generally of necessaries of life which must be derived from this source.

Taking two examples almost at random—one the question of foot-and-mouth disease. To order that the transit of live stock must cease is on the surface a comparatively simple matter. But the financial consequences to the agricultural industry must be enormous. What to me, however, is of still greater significance is the fact that frequently such an order implies a rise in the cost of meat to the consumer of 2d. a pound in a few days. It would be interesting to learn in these strenuous times how many of the poorer working classes are, during such a period, absolutely prevented from purchasing meat and an estimate of the effect on their general physical tone.

Similarly, in connection with the inspection of meat it is easy and sounds ideal to propose that private abattoirs must be dispensed with. This would undoubtedly render easier the question of inspection. But an investigation in the scattered and mixed area with which my own Authority deals revealed the fact that such a change would inevitably lead to an increase in the price of meat to the consumer of between 1½d. and 2d. a pound. Before making any change of this nature it appears to me essential that the effects of such a change upon the cost of production must be considered, for any additional cost must of course be borne by the consumer.

From evidence available on every hand there is one method by which I am convinced we could offer material help, and that is by assisting in the institution of a National System of Live Stock Insurance.

In considering this question, one might emphasise at the outset that I regard it as a possible instrument of the highest order in advancing the cause of preventive medicine. To me it appears that one of the greatest drawbacks of preventive medical science in Britain is that until quite recently the important bearing upon it of comparative medicine has not been recognised. At the present moment there are signs on every hand of an awakening to this fact. This, then, should be the primary and highest aim of insurance of live stock—its ultimate bearing on human disease. Secondly would come its great commercial importance.

It is agreed that there is a great bulk of disease amongst animals in Britain which is unheeded.

Just as occurred under the National Health Insurance Act, which brought millions of people within the scope of medical care who were never there before, so would a corresponding measure dealing with animals bring to the knowledge of those concerned with it the existence of disease in thousands of cases of which they now have no knowledge.

We are aiming, therefore, at a big project, and its effect on medical science could not well be estimated—even if its effect were limited to that resulting from reliable statistical information on Epidemiology, which at present we are without.

A compulsory and national scheme of insurance of live stock should be part of our campaign against disease so effectively commenced by the National Health Insurance Act. If I may say so without offence and in parentheses, one weakness of this latter is that it gives too much prominence to the curative side and insufficient to prevention. But these points only emerge when a great measure of this kind is actually in operation.

Then there is the economic side of insurance—the fact that it would transfer the risk from the individual engaged in Animal Husbandry and pool it amongst all those so engaged.

I submit that this is a principle that is generally recognised in the world of business risks. It is as important to farmer A that the stock of farmer B should be free from infectious disease as it is that farmer B himself should be free from, say, small-pox. Infectious disease is a national question, and is in no sense parochial. Farmer A, then, has an interest in the welfare of farmer B's stock and *vice versa*.

Again, with regard to losses from causes other than infectious disease, the same principle would apply here as, say, in the case of a motor car. Public opinion is tending rapidly toward making insurance of the latter compulsory. But the liability of living things to death from infections is an additional reason for compulsion when dealing with them. Then, again, losses are sustained by individuals through no fault, whatsoever, of their own. In the public interest it is often regarded as advisable to confiscate the property of a private individual, e.g., in swine fever and foot-and-mouth disease; and under certain conditions and in some cases only compensation is granted. Surely there is no equity here? For example, a cow is confiscated in the interest of public health by the Ministry of Agriculture as a producer of milk—compensation will be given. But if the cow, and in the same interest, be seized by the Ministry of Health as a producer of meat, under the meat regulations just issued, there will be no compensation.

The liability of the State already accepted in certain cases (e.g., foot-and-mouth disease), again points to the national character of the problem.

The Insurance Ordinance of Spain, 1556, refers to insurance made upon slaves or cattle. It was not a general

insurance against death from disease or accident, but, evidently, covered only sea risks.

In the reign of Queen Anne a scheme was propounded for the insurance of horses, "whether dying natural deaths or stolen or disabled." It was run from a public house in Smithfield, but its existence was brief, probably, as has been stated, owing to the fact that its policies "covered the risk of stealing."

In 1776 was enacted an Act, 19 George II, c. 5, to prevent "the dissemination of Distemper, which then raged among horses and cattle in the kingdom." It made provision for the granting of compensation for diseased animals killed in the public interest. This act has been continued and amended many times since.

The Farmers' and Graziers' Cattle Insurance Co. was founded in 1844, and passed into liquidation in 1853.

In 1845 the Agriculturists Cattle Insurance Co. was established, "to indemnify farmers against the risk of loss among live stock through disease and accident." This company also passed into liquidation, but it is claimed that it had a most eventful career.

In 1849 the Norfolk Farmers' Insurance Association was formed. Many proprietary and mutual companies have been projected since, some of the chief being :—

In 1877, Horse, Carriage and General ; in 1878, Imperial Live Stock ; in 1899, Scottish Live Stock ; in 1906, Law, Car and General ; in 1907, Workmen and General ; in 1907, National Live Stock, etc., etc.

A Live Stock Policy has been defined as a contract of indemnity, whereby the company agrees to pay to the insured, as compensation, a certain sum of money in the event of any animal described in the schedule thereto dying from accident or disease, occurring or contracted during the continuance of the policy. The insured must observe the following amongst other conditions :—

> "The insured shall not introduce, or permit to be introduced, diseased or infected animals among any insured stock, or upon any part of his premises, or allow the insured stock to mix with infected or diseased animals. Any animal attacked by contagion must be immediately isolated, and all necessary precautions taken to protect the other animals from infection. All animals shall be provided with sufficient and proper food, water and shelter."

Furthermore, in case of accident or illness, the animal must be appropriately treated by qualified persons.

All stock of a "class" on a farm or premises, whether in actual possession at the time of the original proposal or bought at a subsequent date, must be insured.

Although Live Stock is generally interpreted by insurance companies as referring to horses and cattle, some companies, when the whole of the stock on the farm is insured, extend their policies to include sheep and pigs.

Preventive medicine can be read in every line. In the last paragraph is an appreciation of the intercommunicability of disease between different species. But this appreciation stops short at the boundary of an individual farm. How futile. No further evidence is necessary to establish the need for recognising the national character of the problem.

Many different kinds of companies exist in addition to those cited. Insurance is effected against many different kinds of risks. Large premiums are paid to cover the risks of some one particular operation—a case of parturition, etc.

Possibly the most striking example is to be found in the efforts being made by the meat traders at the present moment. They are attempting a little system of insurance on their own account. It will be at once apparent how extremely expensive this must prove to be when it is remembered that an animal will only be in the possession of the meat trader for a few days.

It will be seen that there is no doubt as to the existence of a desire to pool the risks in animal husbandry by some form of insurance. There is abundant evidence that the necessity for something of this kind has existed for centuries.

For the want of a better term, it can only be said that we are "nibbling" at a big problem. *I venture to say that not one animal in 5,000 is insured at all.* It is not surprising that the *premiums* are *prohibitive.*

For example, the approximate rate for the insurance of cattle against death from accident or disease varies from 5 per cent. in the case of fattening cattle (over six months old) to 8¾ per cent. in the case of certain other cattle.

This heterogeneous method cannot possibly make any contribution to the efforts in the major problem of preventive medicine.

The State recognises this in other countries, and makes its contribution. On insurable property valued at £450,000,000, it is easy to appreciate the enormous sum that would be avilable if the owners contributed only 2 per cent. and the State, say, 1 per cent. This would provide enough to meet all risks, would be ample to cover all administration, research and treatment, and would make a contribution to preventive medical science from this side unexampled in its history. It is not for me to apportion the risks. To do this equitably requires the advice of actuaries.

At the present time it is possible to insure against all kinds of risks, and there are many companies undertaking such business.

On noting the amount of the premiums, one cannot but conclude that they are excessive. There is a reason for this, inasmuch as the number insured is so small that one could almost go as far as to say that *Insurance is negligible in this country.*

But the numerous and varied attempts that have been and are being made serve only to emphasise the fact that a general comprehensive and national system is an urgent necessity.

The crude attempts made cannot but have an adverse effect on prices, *and they are of no real practical value whatsoever in the cause of Preventive Medicine on the lines I indicated at the outset.*

As is well known, a striking feature of agriculture in Belgium is the enormous number of societies that has sprung up. The societies are of different kinds and are formed for various objects. It is said that there is at least one in every village.

Almost 20 years ago there were in Belgium no fewer than 1,622 societies for the mutual insurance of live stock.

In West Flanders insurance of live stock has been made compulsory by the Provincial Government. The premiums are levied along with the other taxes, and are very light, being only 5d. per annum for a horse, 2½d. for a cow, and

a farthing for a sheep. But compensation is only paid, however, where the animal is ordered by the Sanitary Authorities to be destroyed on account of disease. Compensation in these cases thus corresponds to that given in Britain for confiscation in some of the scheduled diseases, e.g., swine fever, foot-and-mouth disease, etc.; but here such compensation as is given is contributed entirely by the State. In West Flanders there are also many mutual insurance societies covering the other risks.

With the exception of West Flanders, practically all the rest of the insurance of cattle in Belgium, before the war, was done by local mutual insurance companies, which gave compensation for losses from all causes, and which compensation amounted usually to two-thirds the value of the animal insured, the premiums being, of course, very much higher than under the compulsory scheme in West Flanders.

191 societies insured horses up to 75 per cent. of their value for 1.2-1.5 per cent. 59 societies insured pigs, and 349 insured sheep and goats, the premiums being at a higher rate.

It was well written before the war that the facts concerning the live stock insurance in Belgium would probably surprise some English readers. *Eighteen years ago* 268,464 *cattle alone valued at* £3,839,842 *were insured.* When it is remembered that the members of the mutual insurance societies are mostly smallholders, and, on the average, each owns only 2.8 cows, it will be seen how widespread insurance is. Well might it be claimed that "there is no doubt that the development of insurance has been a great advantage to the Belgium smallholder. Hitherto, when he lost a horse or cow, it sometimes meant almost ruin to him, and it was a common thing for collections to be raised in the villages to help those who had suffered in this way. Now he is independent of such help."

In 1897 and 1898, the insurance companies in Hungary, having unsatisfactory results, suddenly raised the premiums for certain forms of insurance by 100 per cent. The Hungarian farmers resented this and turned their attention to the possibility of their becoming self-insurers.

The Government promised 400,000 crowns, provided that at least 1,000,000 crowns were subscribed otherwise.

In Germany and some other countries, the great Agricultural Co-operative Unions made collective terms with some powerful capitalist insurance company which, owing to their numbers, could quote them lower premiums than they could quote to the general public. This latter method has been commonly adopted in Scandinavia. The Hungarian method has been claimed to be particularly suitable under appropriate circumstances for insurance of live stock and fire. There was centralised management, in which no part was taken by the majority of the members. On this account it was referred to as being mutual rather than co-operative. "It pre-supposed numbers as well as good organisation, and very judicious handling of the risks insured." Insurance of live stock was the first form of insurance to which this method was applied. It was actually first prompted by "*the risk to which the small owner of one or a few cows or pigs found himself exposed. That cow or that pig was his main breadwinner. It stood to him for a substantial capital. But it was at the mercy of any untoward accident . . . . to the small man it represented a serious danger.*"

In 1924 Denmark had 1,400 small associations for mutual insurance. The losses were shared by all their members, "each contributing pro rata of his own insurance."

In Holland there were at that time about 400 co-operative horse insurance societies insuring about 60,000 horses.

In Switzerland, handsome contributions are made by the Cantonal Governments and the Federation. In 1906 out of £78,712 paid in compensation, £24,510 were so contributed. Insurance societies in Switzerland are very numerous.

At this time there was Government interference with the stockowner in the matter of insurance in practically every Continental country, with the exception of the Netherlands.

In Belgium there was a generous Government support of insurance, with close Government supervision, but in Switzerland there was little Government interference, notwithstanding the fact that, as already stated, the financial support from the Government was so substantial.

Twenty years ago it was advocated that *every British stockowner should, if possible, be compelled to insure all his animals and receive assistance out of the local or imperial funds.* It was claimed that "an extensive system of insurance would, if general, cost but a little," and that private companies could "with only a small fraction of the public insuring, accept a cow . . . . valued at £20, for £1 3s. per annum."

At that time animal insurance existed in Germany as a State-aided institution. Certain States subscribed liberally to the funds, and left it permissive to the farmer to join. But of this a well-known English Authority said: "Experience, however, shows that *this is wrong, and that if this institution is to flourish it must be obligatory for all to join for the general good . . . .*"

It will be seen that the primary object of the Continental schemes, and such schemes as have existed in this country, is the commercial one of pooling the financial risk. I find no reference to, and little, if any, suggestion of preventing animal disease on account of its bearing on human disease. Nevertheless, the prevention of animal disease as a commercial asset is fully appreciated, as, for example, in the general regulations laid down for policy holders, to which reference has been made.

Transport of Wild Animals.

ENQUIRY BY ZOOLOGICAL SOCIETY.

"There is a considerable traffic in living wild animals, especially mammals, birds, reptiles, amphibia, and fishes, some consigned directly to zoological gardens, others to amateurs, others to the trade for sale. Unfortunately there is plenty of evidence that the conditions under which these are packed and cared for on the voyage are often very unsatisfactory. There are unnecessary deaths during transport, and it is the experience of zoological gardens and of purchasers from dealers that the mortality soon after arrival is disproportionate to the natural viability of the species. Quite apart from gross carelessness, which is probably infrequent, it seems certain that many of the unsatisfactory conditions are due to ignorance. The

Council of the Zoological Society, at the suggestion of the Secretary, Dr. Chalmers Mitchell, has appointed a committee to inquire into the matter and to lay down sets of standard conditions for different kinds of animals.

"Major Stanley Flower, formerly director of the Zoological Gardens at Cairo and now a member of the Council of the Zoological Society, has accepted the chairmanship. His colleagues are:—

Appointed directly by the Society.—Mr. D. Seth Smith, Curator of Mammals and Birds at the Zoo; Mr. E. G. Boulenger, Director of the Aquarium; Miss J. B. Procter, Curator of Reptiles; and Mr. G. B. Chapman, one of the largest dealers in wild animals. On the invitation of the Society.—Mr. N. B. Kinnear, nominated by the Trustees of the British Museum (Natural History); Mr. P. J. L. Kelland, Deputy Chief Veterinary Officer, nominated by the Ministry of Agriculture and Fisheries; Colonel A. K. Wyllie, nominated by the Council of the Royal Society for the Prevention of Cruelty to Animals; Mr. D. A. Bannerman, nominated by the British Ornithologists' Union; Miss E. Maud Knobel, nominated by the Avicultural Society; and Mr. F. N. Grosvenor, representing the P. and O. and other shipping companies.

"The Mercantile Marine Department of the Board of Trade has offered all the assistance in its power.

"The function of the committee, in general terms, is to consider all stages in the transport of wild animals from the selection of suitable individuals for travelling, to their first care after unpacking on arrival at the final destination. It will include simple criteria of health and condition before packing (such as ascertaining whether the animals are ready to take the kind of food that can be provided on the journey), suitable boxes, cages, bedding and so forth, directions for hygiene and food and water during transport, attention required during transport, immediate treatment on reception, and treatment during temporary detention, pending dispatch to their ultimate destination.

"Incidentally the committee will doubtless review some of the unsatisfactory conditions now in existence, but their object will be prevention rather than recrimination. It is hoped that their labours will lead to the drafting of full advice for different kinds of animals. The Council of the Zoological Society is prepared to have such advice printed for distribution in separate pamphlets, as well as in a collected form. The Society already possesses a good deal of information on the matter based on its own experience and this will be at the disposal of the committee. It is hoped that advice, sifted, added to, and arranged by so representative a body, will have a far-reaching influence."
—*The Times.*

The Veterinary and University Students.*

To the Editor of The Veterinary Record.

Sir,—With reference to the recent correspondence in the *Record* comparing veterinary and university students, I would like to draw the attention of your readers to the columns of the daily Press dated December 14th, 1927.—Yours faithfully, J. McCunn.

Royal Veterinary College.
December 15th, 1927.

*Received too late for inclusion in our correspondence columns.

The Veterinary Record.

17th December, 1927.

NATIONAL INSURANCE OF LIVE STOCK.

The question of compulsory national insurance of live stock dealt with before the International Congress on Public Health at Ghent, by Professor Share-Jones, whose published paper appears elsewhere in this issue, is one of paramount interest to the veterinary surgeon, the stockowner, and indeed the whole community.

The desirability of pooling risks amongst all engaged in an industry rather than requiring any individual so engaged, to carry them, is now generally recognised and nationally approved. Risks which to an individual might be crushing, when distributed over an industry might be so infinitesimal as to be scarcely appreciable. There is no other line of business to which this applies more appropriately than to animal husbandry.

From the commercial side, then, there is no doubt as to the advantages of insurance. But what is of even greater interest to our profession, as one concerned with disease, is the issue raised by Dr. Share-Jones as to the contribution that could be made by a national system of live stock insurance, to the cause of preventive medicine as a whole—a view put forward for the first time. Here our profession can be of direct scientific service and can perform national work of the highest order.

It is interesting to learn that the proposals have been before at least one of the great political parties and regarded with favour and that for some months Professor Share-Jones has been busily engaged in advocating them on the political platform. Preparatory steps such as these are, of course, essential if the necessary legislative measures are to be secured.

The Horse again in Favour.

Experience of Firms on Merseyside.

Under the above headings, the *Liverpool Post and Mercury* of 26th November, prints the following:—

"Is the horse coming back? A Liverpool veterinary surgeon, recognised as an authority on horse traction in England, declares Old Dobbin is galloping back into the favour of big city firms, and that the last two years have seen increasing victories of the cart-horse over motor transport.

"This protagonist of the horse is Mr. C. W. Elam, of Roscommon Street, who has been singled out, in the annual report of the Board of Veterinary Studies, as one who has investigated thoroughly the economies of horse traction, and has established that it is the least expensive within a radius of ten miles.

"'You only have to use your eyes, and you will see that many Liverpool commercial firms which once went in for vans and lorries, have decided to put horses in their place,' he told the *Daily Post* yesterday. 'Nearly every milkman drives a horse; timber merchants, brewers, the cleansing departments of Merseyside corporations, and many of the big retailers are using more horses, while the railway companies have as many as ever. Farmers are doing away with tractors, since the horse, besides being less expensive to buy and keep, is equally useful in purely agricultural work.'

COMPARATIVE COSTS.

"Mr. Elam's slogan is 'Horses do half the work of motors at one-third of the cost.' To sum up the comparison more fully, he gave the following comparative facts and figures.

Lorries.

Cost of motor and trailer from £1,000 to £1,300.

Tax, insurance, running expenses, and wages for either two or three men, £21 a week.

A lorry will work satisfactorily for little more than three years.

Horses.

Horses and turnout costs about £200.

Running expenses, including one man's wages, about £7 a week.

Depreciation about £30 a year.

Horse's average life eight years.

"'It is all a matter of capital outlay, repairs, and running cost,' said Mr. Elam. 'One haulage contractor tells me he has doubled the number of his horses and disposed of most of his lorries. The reason is clear when one remembers that, for the same capital outlay as will buy a lorry, five or six teams with an eight to twelve tons hauling power can be put on the road.'

"The question of speed only operated in cases where quick delivery was essential. The utility of motor vehicles could not be disputed, but in large towns, where traffic was necessarily slow, the comparative costs must in the majority of cases result in preference to the horse.

"Even in New York, reputedly so overrun with mechanical transport, the old horse was being more and more pressed into service for short distance work."

PREVENTION OF DISTEMPER.

Overheard in railway carriage travelling from the Crystal Palace to Victoria on the occasion of the Royal Veterinary College Championship Dog Show, and after hearing Major Dunkin's discourse on the research into canine distemper :—

Garrulous elderly lady, having first made the statement that she had lost £200 worth of puppies in one litter from distemper : "Well, what I do when I see distemper coming on, I give them a teaspoonful of Yadil, and I always hang up a bunch of onions in the kennels. The onions draw all the poison out of the atmosphere, but you must be careful not to eat the onions afterwards as they are all black in the middle from the poison."

CLINICAL REPORT.

Fracture of the Head of the Femur in a Gilt.

By FRANK CHAMBERS, F.R.C.V.S., Wolverhampton.

On February 23rd of this year I was called to examine a gilt that had been roughly handled by another sow. A broken leg was suspected by the owner. On examination, I came to the conclusion that the femur on the left side was fractured, but exactly where I could not determine, for the bones in this region are extremely well covered with muscle. The gilt was unable to rise. She had just finished suckling a farrow of pigs.

I suggested slaughter, but the owner's wife would not hear of such a thing as this gilt was a particular favourite. For weeks this good lady kept the gilt alive by spoon feeding it on milk, gruel, eggs, etc., as the gilt steadfastly refused to take food voluntarily.

On April 21st, I lanced a large abscess on the right gluteal region. This abscess was in all probability caused by the repeated bruising of the flesh in this area. The gilt could now stand a little on three legs and was getting about and eating fairly well, but she was extremely emaciated. I did not see my patient again until November 10th, when at the farm attending to a cow, I was asked to look at the gilt and advise treatment for two lumps that had appeared on the outside of the affected leg. Two of the "lumps," which were due to abscess formation, were on a level with the stifle joint, and the third was in the flank on the same side. I opened the upper abscess and liberated about a cupful of thick, greyish, creamy pus. The middle one contained what I thought to be caseated material, but on opening the swelling I found, to my great surprise, the head of the femur and a section of the femur just below the head. The accompanying photograph is to scale.

There was no visible fistula in the cavity and it appeared to be lined with a thick fibrous coat. The third abscess in the flank contained the same kind of pus and two sharp spicules of bone. The gilt walked quite well and we had some difficulty in catching her to secure her for the evacuation of the abscesses. Since her accident she has had another litter of pigs. It would be of great interest to see how nature has effected the repair of, or replaced, the femero-acetabular articulation.

The Royal Agricultural Society.

"The membership of a body like the Royal Agricultural Society of England can be taken to be symptomatic of the condition of the industry represented," writes the agricultural correspondent of *The Times* in Monday's issue of that paper. "Measured by this gauge, the position is perturbing, as regards not only the state of the farming business but the security and activities of the Society. The membership has fallen in 1927 from 13,084 to 11,954, a net reduction of 1,130. The losses through deaths and resignations totalled 1,557, compared with an average for 1922-26 of 891, while the new members numbered only 427, compared with the average for the five years of 930. It is computed that 1,000 new members are required every year to balance the losses, and in 1928 about 2,000 will have to be elected to restore the normal position. But a membership of 13,000 is small for a great national institution, already rendering great, and capable of rendering still greater, services to agriculture in its varied phases. There is not a question relating to land, live stock, and their management that is beyond the resources of the Society to investigate and advise upon in the full light of present day knowledge, and the fact that access to this store of practical and scientific enlightenment can be obtained by the payment of £1 a year does not seem to be adequately realised. The Show of the Society is of world-wide pre-eminence and influence, and it may be hoped that the Midland Counties will rally to its support in especial strength in the year of the Nottingham Show."

Animal Diseases in Suffolk.

Tuberculosis in cows, swine fever, and parasitic mange were the subjects discussed at the last meeting of the Diseases of Animals Joint Sub-Committee for East and West Suffolk.

It was reported that, since the last quarterly meeting, 22 cases of suspected tuberculosis had been reported, and 235 animals had been examined. Fifteen cases, affecting 17 animals, were confirmed, and 16 animals were slaughtered. Fourteen of the latter cases were of the "advanced" order, and two were not severe. The total value of the animals slaughtered was £106, and the compensation paid to owners was £46. The sum of £15 17s. 6d. was collected as salvage of carcases.

In the course of discussion, it was stated that the legal position of the farmer was that he must satisfy himself, by the best means at his disposal, whether the animals under his care were diseased or not, and must prove to the Court that he had done so.

In regard to swine fever, it was reported that during the preceding quarter 175 cases had been reported of which only eleven were confirmed, and 153 were found clear, while eleven further cases awaited determination. In the previous quarter 18 cases were confirmed.

The Chairman said there was an improvement, but they hoped for better results yet.

Reports on parasitic mange showed that there had been nine cases confirmed, three in East Suffolk and six in West Suffolk.

REPORT.

[Annual Administration Reports of the Bombay Veterinary College, Bombay City and Harbour Veterinary Department and Civil Veterinary Department in the Bombay Presidency (including Sind) for the year 1926-27. pp. 55. Printed at Bombay and obtainable from the High Commissioner for India or through any recognised bookseller.]

The first report deals comprehensively with the year's work of the Bombay Veterinary College, and one is struck with the fulness of the arrangements that are made for the general welfare and post-graduate employment of the students.

For example: of the 91 students remaining on the rolls of the College at the end of the year, no less than 37 were in receipt of some assistance from scholarships. In point of material for clinical instruction in diseases of the larger animals, the Bombay College compares favourably with the British schools. We read that "during the year 3,508 in-patients and 850 out-patients were treated .... Of the in-patients 473 were equines, 2,149 bovines and 886 miscellaneous. The average daily attendance was 206. Twenty-three dogs were subjected to anti-rabic treatment." It is not clear from the above figures how it happened that "the average daily attendance was 206." Other arrangements made for the benefit of the students include the provision of a Students' Hostel which "was fully occupied during the year," a Students' Gymkhana or games club, athletic sports, riding class, drill, excursions to various places of technical interest, etc.

Of 75 students who sat for examinations during the year 50 passed, including 14 who qualified at the final examination. Class A received 39 entrants.

Under the heading "Employment of Graduates" we read that "of the 16 graduates who passed in 1926, 9 are in service of Government or Local Bodies and 7 in the service of Indian States .... Out of a total of 46 graduates passed out during the last three years, 29 are in Government service and 17 in India States Service. All have obtained employment."

Leaving the Veterinary College and passing to the report on the work of the Civil Veterinary Department in the Bombay Presidency, we are given some interesting figures on contagious diseases. "The total number of attacks from these diseases was 65,579 and the mortality 11,613," as against 74,597 attacked and 26,734 deaths in the previous year.

The diseases included: rinderpest, 15,189 cattle attacked, with 7,002 deaths, *i.e.*, a mortality roughly of 50 per cent.; hæmorrhagic septicæmia, 3,575 attacked and 2,838 deaths; black quarter, 528 attacked and 476 deaths; foot-and-mouth disease, 43,852 attacked and 230 deaths; anthrax, 894 cases and 607 deaths.

Other contagious diseases reported were: dengue, piroplasmosis, trypanosomiasis, parasitic gastritis, rabies, pleuro-pneumonia, goatscab and fowl cholera.

Much inoculation was undertaken against rinderpest, hæmorrhagic septicæmia, anthrax, and black quarter, and extraordinary success is suggested.

In my opinion, too much success is suggested: the figures seem to me in some instances to be presented in such a way

as to give an incorrect impression of the utility of these preventive measures.

For example we read that, in dealing with hæmorrhagic septicæmia, "inoculations were carried out in 87 villages and 8, 099 cattle were protected .... Twenty-two deaths were reported among inoculated and 862 among uninoculated animals in these villages. One thousand and six cattle were, in addition, protected against hæmorrhagic septicæmia by vaccination and no deaths were reported among those protected."

The impression conveyed is that vaccination *plus* serum inoculation gives a 100 per cent. immunity from fatal hæmorrhagic septicæmia !

An analysis of the incidence of mortality among the serum-alone inoculated animals, similarly conveys an impression of an immunity not far short of 100 per cent. and I, for one, am not able to accept these figures as representing the actual results to be expected from such protective measures.

In the instance of rinderpest we read : "23,159 animals were protected against rinderpest by the serum-alone method in 212 villages. . . . In the villages where inoculation was undertaken, 61 inoculated and 3,750 uninoculated cattle died. The value of this method of protection cannot therefore be denied." No one will quarrel with the concluding statement in the foregoing sentence, but those who know India and can visualise the conditions under which many of the animals were inoculated may wonder if the degree of protection could be, in fact, quite so high as suggested by the quoted figures.

Excellent work is being done, animal life is being protected in no small degree and the utmost credit must be given to the personnel, European and native, who labour to bring these things about under most difficult conditions.

My only object in making the above criticisms is to illustrate the mistake of giving, without adequate comment, figures which are so unusual as to be dangerously likely to arouse incredulity in the reader.

The omission of any reference to the number of uninoculated animals that were not attacked increases the reader's difficulty.

Some idea of the vastness of the work being done in India is conveyed by the following quotations :—

"The staff visited 4,706 villages and treated 24,715 animals for non-contagious diseases .... castrated 9,985 animals.

"Seven new dispensaries were opened during the year, bringing the total number in the Presidency proper to 103.

"The number of cases treated at Hospitals and Dispensaries amounted to 1,35,299 and medicines were supplied to 45,867 cases for treatment at home. The numbers for the previous year were 1,24,099 and 39,947 respectively.

"Among the cases treated at Hospitals and Dispensaries were 10,928 which were castrated."

The reports contain an abundance of statistical tables and some characteristic photographs of the various types of buildings used for veterinary purposes.

One concludes by reflecting upon the enormous advantages of India as a clinical field for the study of the diseases of the larger animals, and by hoping that from the present political difficulties of India there may at last emerge a veterinary organisation sufficient for her immense needs and worthy of so great an opportunity. J. W. R.

Royal Veterinary College Presentations.

STAFF AND STUDENT TRIBUTES TO SIR JOHN M'FADYEAN AND DR. SHEATHER.

It was with enthusiasm, tempered by feelings of deep regret at the attendant circumstances that the professional and lay staff and students of the Royal Veterinary College, Camden Town, assembled in the New Lecture Theatre on Monday afternoon last to do honour by presentation to the recently-retired Principal of the College and Director of the Research Institute, Sir John M'Fadyean, and to the late Assistant Director of the Institute, Dr. Leslie Sheather.

The ceremony was presided over by the Dean of the College, Professor James Macqueen, who was supported on the platform by Principal F. T. G. Hobday and other representatives of the professional staffs of the College and of the Research Institute, by Major-General Sir John Moore, representing the Governors, and by Professor L. L. Wilberforce, D.Sc., Deputy Vice-Chairman of the University of Liverpool and Chairman of the Board of Veterinary Studies of the University.

The presentation to Sir John M'Fadyean took the form of a handsome "Grandmother" clock, bearing the inscription :—

"Presented to Sir John M'Fadyean by the Professional Staff, Students and Employees of the Royal Veterinary College and Research Institute on his retirement—1927." Below the inscription plate was a silver disc on which was engraved the College Crest. Dr. Leslie Sheather was the recipient of a gold cigarette case, also inscribed.

The CHAIRMAN said they were there that day for the purpose of showing their appreciation, respect and affection for their late Principal, Sir John M'Fadyean, and their former colleague, Dr. Sheather. (Cheers). He would not anticipate the remarks of Mr. Tomlin, who was to make the presentations, but he would like to add a personal word, that he had served for thirty-four years under Sir John M'Fadyean and throughout the whole of that period there had never been the slightest discord or altercation of any sort or kind. Their relations throughout had been most cordial and it was with very great regret that he was acquainted with his resignation, and personally he hoped Sir John would live long and prosper. (Cheers).

The presentations were made by the senior student, Captain G. A. TOMLIN, M.C., who reminded his hearers that Sir John M'Fadyean held the position of Principal of the College during thirty-four years. His tenure of office had been marked by his maintenance of the dignity of his profession, coupled with his world-wide reputation for pathology and the well-known courtesy of his personality. In honouring him that day they rendered tribute to the calling of which he was so distinguished an ornament and he was sure that those who were still students would ever hold his career as an example before them. (Cheers.)

Doctor Sheather, whom they all would hope to meet in the Examination Hall—not too many times—(laughter)—was for several years in the Research Institute and had made several important discoveries towards the eradication of diseases that assailed our animals. To those already graduated his (the speaker's) advice would be presumptuous in the presence of many leading lights of the veterinary and scientific world, but he knew they would agree with

him when he said that they stood with the students in fostering the *esprit de corps* which should ever reign in that, their *Alma Mater*—(cheers)—and which was always so cordially maintained by their former Principal. He would request Sir John M'Fadyean to accept that clock as a token of their esteem and as a remembrance of the days when he was among them as their Chief. (Loud cheers.)

To Dr. Sheather he would give, also in the joint names of those, professional and lay, at Great College Street, that cigarette case, with their good wishes. (Renewed cheering.)

Sir JOHN M'FADYEAN, who was accorded a tumultuous ovation on rising to acknowledge the gift, said: While coming here, I calculated that I must have spoken from this spot to students about 4,000 times, and I think I never rose with so little confidence that I should be able to say exactly what is in my mind.

It is almost exactly thirty-four years since I joined the staff of the Royal Veterinary College and you will understand that since I have spent the intervening period—nights as well as days—in it, there is a large element of sadness in my retirement. But since I have severed my connection with you it gives me the greatest happiness to be assured on behalf of the staff, the students and the employees that they regret my going and that I have their good wishes in my retirement. (Cheers.) During these thirty-four years the College has had rather an uphill fight, but I hope that when the history of this period comes to be written it will be admitted that it has not been a period of stagnation, but that we have made some progress. For that, the staff deserve great credit. (Cheers).

I shall be quite content if it is thought that a small share of it belongs to myself.

I am happy to be able to corroborate what my recent colleague, Professor Macqueen, has said regarding our own relationship. I am thankful to say that during the whole of those thirty-four years I have had the most sincere and friendly co-operation from all the members of the staff. I am happy also to recollect that during the whole of that period my relationship with the students could hardly have been better, and, just as is the case with my colleagues on the staff, that is as much, perhaps more, due to themselves as to me. Through simple survival, I suppose I have had to instruct more veterinary students than any other man now alive. Professor Macqueen, who fortunately is still with you—(cheers)—in respect of that runs me very close and I hope he may eventually beat my record. (Renewed cheers.) In view of what I have said about my relationship with the students, you will perhaps be surprised when I tell you that even on recent nights I sometimes wake up in terror because of a dream in which my class has suddenly become riotously disorderly. (Loud laughter.) It just shows that not all nightmares are founded upon actual experience.

I am glad to think that there is a prospect that better times are coming. I hope that these better times will make it possible that the services of the staff, upon whom the welfare of the College mainly depends, will be better recompensed than they have been in the past. I hope also that it will now be possible to make better provision for the comfort of the students.

I will not multiply words, Ladies and Gentlemen, because I feel that they would in the end be inadequate, but I thank you, both staff and students, from the bottom of my heart and I am greatly obliged to Mr. Tomlin for having so feelingly conveyed your sentiments to me. With regard to this present, a token of your esteem, I think it is both beautiful and useful and I can assure you that it will have an honoured place in my new home. When I look at it, or hear it, I shall always think about the happy days, amounting to almost exactly half my life, that I spent in this institution. (Loud cheers).

Dr. A. LESLIE SHEATHER, who also was warmly received, said in the course of his acknowledgment: May I say that I feel this afternoon as though I must address you as two persons. Speaking as the first of these, I think I should have been notified in some way that it was intended to make a presentation to Sir John M'Fadyean, because there could be no one who could have been more anxious to share in that presentation than myself. (Cheers.) There is now remaining only one member of the staff who was here when I was first appointed, and that is Professor Macqueen. Of all Sir John's thirty-four years, I have been with him for twenty-one, and I can also add, with Professor Macqueen, that during that time we have not fallen out at all.

As the second person—that is, the present one as distinct from the person of the past—I must try and convey to you my appreciation of the gift you have made to me. Circumstances have compelled me to undertake that rather dangerous procedure of swopping horses in midstream. This gift means to me that there will be those who will stem the current a bit while I try to find another mount.

I thank most sincerely every one who has subscribed towards this gift for me. (Cheers.)

Upon the call of Principal HOBDAY, musical honours and rounds of cheering brought to a fitting close a ceremony memorable in the annals of the College.

SUPPORT FOR THE "BACK TO THE HORSE" CAMPAIGN.

To support the "Back to the Horse" campaign, recently launched by the National Horse Association of Great Britain, a conference of associated societies and firms was held on December 8th, at 12 Hanover Square, London. "Our initial efforts have been most successful," said Mr. A. B. Charlton, secretary of the association, who presided. "The demand for display cards and poster stamps shows that there is a very strong body of people, whether sympathetically or vitally affected, who recognise that the horse is still an important factor in transport work."

Mr. Cecil G. Argles said that in the last few years there had been a marked decrease in the number of horses bred and reared in this country, and in one fortnight 132 foals were sent abroad from Lincolnshire for meat. Every one of these foals was of the Shire type.

Sir Lees Knowles promised a donation of £100 to the campaign, and representatives of various societies also offered support. It was thought that the campaign might be helped by interesting the younger generation in the use of the horse, and it was decided to offer next year at affiliated country shows a silver medal in the children's riding class.

DIVISIONAL REPORT.

Midland Counties Division.*

CRIB-BITING OPERATION PERFORMED AND DISCUSSED AT BIRMINGHAM.

The quarterly meeting of the Midland Counties Division was held at Holliday Street Wharf, Birmingham, on Thursday, November 10th. The President, Mr. S. M. Woodward, was in the Chair, and there were also present: Messrs. F. L. Gooch, J. W. Conchie, W. F. Aston, H. Tudor Hughes, B. DeVine, F. E. Somer, J. Martin, T. Martin, F. Chambers, G. V. Tyerman, H. W. Steele-Bodger, J. Cormack, W. H. Brooke, H. W. Dawes, A. Robertson, T. Slipper, G. F. Banham, E. O'Neill, J. Robertson, sen., A. A. Forsyth, W. E. Ison, T. Marriott, E. W. Parkes, J. L. Brain, H. S. Reynolds, E. Brayley Reynolds, R. Tindle, A. E. Ferguson, R. Watts, C. F. Parsons, R. Palmer, A. J. Beeson and H. J. Dawes (Hon. Secretary).

Visitors: Councillor Painter (Birmingham), Messrs. W. White (Birmingham), H. Tudor Hughes (Oswestry), W. K. Townson (Peterborough), G. H. Leader (Bridgnorth), R. Murray (Rugeley), H. Griffiths (Birmingham) and A. Dawes (Wellingborough).

Apologies for unavoidable absence were announced from Sir John M'Fadyean, Sir Gilbert Barling, Professor F. T. G. Hobday, Dr. Graves, Messrs. T. Ludlow, J. O. Powley, E. Ringer, M. Sadler, R. Lake, L. W. Heelis, M. Tailby, E. Franklin, P. Bayliss, Trevor Spencer, J. R. A. Jones, J. J. Burchnall, H. S. Cockburn, L. C. Maguire, Jas. Whyte, W. Tart, R. L. Phillips, W. Trigger, R. P. Holmes, D. Forwell, J. R. Carless, H. A. Turner, G. Eaton, T. H. Hobson, H. B. Hiles, R. H. Over, W. W. Grasby, E. Hall, A. B. Forsyth, W. Dale, W. J. Dale, A. Williams, W. Beddard, R. Hughes, G. Townsend and others.

The minutes of the previous meeting were duly confirmed.

The HON. SECRETARY referred to the bereavement that had befallen one of the past presidents of the Division, Mr. L. W. Heelis, of Solihull, through the death of his wife. Mrs. Heelis, he said, was known personally to most members of the Division and he proposed that they tender their heartfelt sympathy to Mr. Heelis.

This was seconded by Mr. BROOKE, supported by the PRESIDENT, and carried.

Nominations.—The following members of the profession were nominated for membership of the Division: Mr. J. L. Brain, of Tewkesbury; Mr. H. S. Caldwell, of Newcastle, Staffs.; and Captain W. K. Townson, of Peterborough.

COUNCIL'S REPORT.

The HON. SECRETARY presented the report of the Council, which met earlier in the day. The Council recommended that on the occasion of the annual meeting in February, the proceedings commence at 6-30 in the evening, that they be limited to formal business, and that the subsequent dinner be on a larger scale than usual. It was recommended that ladies be invited, and that the guests should include the medical officers of health of the three surrounding counties, as many veterinary surgeons, non-members of the Division, as cared to attend, and any others whom the President and the Hon. Secretary thought fit to invite.

This was now agreed to by the general meeting and the following were appointed a committee to carry out the arrangements:—The President, the Hon. Secretary, Mr. Cormack, Mr. Brooke, Mr. DeVine and Mr. H. W. Dawes.

The Council further reported having considered a letter from Dr. Leslie Sheather, who stated that having severed his connection with the Royal Veterinary College and the Research Institute at Camden Town, he was going into practice as a pathologist and was equipping a laboratory. The Home Office declined to register private practitioners under the Vivisection Act, but intimated that if he had the support of professional bodies his claim to registration would receive sympathetic consideration. Dr. Sheather therefore asked for the backing of that Division, and the Council unanimously recommended that this should be given, on the ground that private laboratories in proper hands were something which the profession ought to encourage.

The general meeting endorsed this view and instructed the Hon. Secretary to acquaint the National Veterinary Medical Association of the step which the Midland Division had taken in this matter.

CRIB-BITING OPERATION.

The company next witnessed an operation for the cure of crib-biting, which was performed by Major C. H. S. TOWNSEND, O.B.E., M.C., R.A.V.C., who afterwards gave a short address on the subject.

Major Townsend said: In the few remarks I propose to make regarding the crib-biting operation I shall not confine myself to a description of its technique, as several full accounts of the method of performing it have lately been described in the veterinary press, among others by its originator, Professor Forsell, in the *Veterinary Journal* of December, 1926; by Professor Mitchell, in the *Veterinary Record* of August, 1927; and by myself in the *Journal* of February, 1927; and I am sure members can follow it better from these accounts than from what I could give in reiteration.

I will, however, put before you a few points and experiences which have occurred to me in connection with the operation, and also (what I consider most important) its ultimate results on a number of cases.

RESULTS. During the last two years I have performed this operation on 43 cases—all army animals—and although it has not been possible to keep trace of all these animals, from recent statistics of the horses I am still able to trace, the results are:—

About 60 per cent. permanently cured (some of these were operated upon over two years ago).

Twenty per cent. still attempt to windsuck, but whereas previous to operation they were very debilitated and frequent sufferers from colic, they now maintain their condition and do not get colic.

Twenty per cent. failures.

As regards the Failures—some of these performed the act of wind-sucking by extending the head instead of bending it; consequently, other muscles than those

* Received on December 2nd, 1927.

involved in the operation were used. These cases are fairly rare and it is useless to perform the operation on them.

In one or two other failures I only removed about three inches of muscle instead of six, and left in more fascia than usual, and I would impress upon anyone undertaking the operation that it is useless to remove less than six inches of muscle, and that its success greatly depends on removing the muscles and fascia involved absolutely cleanly. Any muscle or fascia left allows adhesions to take place between the severed ends of the muscles, and the act of wind-sucking will recommence. I am unable to give any reason for the other failures.

Mortality. This is not an operation dangerous to the life of the animal. Of the 43 cases, only one death has occurred which can be attributed directly or indirectly to the operation. In this case death took place from pneumonia four days after operation, and was accelerated by serious post-operative hæmorrhage, which, in my opinion, was due to the use of adrenalin. It was the only case in which adrenalin was used, and although the hæmorrhage was well controlled at the time of operation, it appears a bad drug to use in these cases as the severed blood vessels, being contracted, are not noticed and dealt with at the time of operation, and consequently when the effects of adrenalin have worn off bleeding commences.

Another interesting point, which I do not think has been discussed to date, is how one would give a certificate in examining a horse for soundness which has been successfully operated upon for wind-sucking. Perhaps some of the members present will give their views on this point.

A remarkable thing in this operation, to my mind, is the great rapidity with which such an extensive wound, adjacent to and exposing such important structures, should completely heal in about 14 days, and I attribute the rapidity of this healing by first intention to three things :—

(1) Asepsis at time of operation and complete removal of blood clot by normal saline solution before closure of the wound.

(2) Efficient drainage by means of tubes. Before using drainage tubes I had trouble in several cases owing to accumulated blood clot. In no case has this occurred since using drainage tubes.

(3) *Method of suture.* I would like to bring the method of suture used in this operation to your notice in order that it may be used in other operations where healing of extensive skin wounds is looked for by first intention. I have latterly used this method of suture in operations for capped elbow and other surgical and accidental wounds, where the skin is fairly loose, and I have been surprised at the rapidity with which healing by first intention takes place. The ridge which you would expect to remain, completely disappears in about a month.

Whether the operation will ever become popular in England as a routine surgical operation remains to be seen ; at present, it is new and somewhat of a novelty and my own view is that outside the army it is unlikely to become very popular. Although not really serious, it will appear to be so from the client's point of view, and many crib-biters are hardly valuable enough to warrant the cost of operation. I consider, however, that it is an operation which has come to stay in the case of a valuable hunter or racehorse which has become so debilitated owing to wind-sucking or crib-biting as to render it incapable of keeping sufficient condition either to hunt or race.

One remaining point—I do not consider the operation for wind-sucking need or should be considered as a specialist's operation. Undoubtedly it can be conducted with greater rapidity by an operator who has performed it frequently, but it can be performed with perfect safety by any veterinary surgeon without previous practice, providing he is sure of his surgical anatomy.

In conclusion, I would like to thank you for the honour you have done me in asking me to perform the operation before you to-day.

Discussion.

A brief discussion, which followed, was opened by Mr. E. Brayley Reynolds, who first complimented Major Townsend on the expeditious manner in which he had performed the operation. Outside the army, he said, it was hardly likely that one would be often called upon to undertake such a task, because the commercial value of the subject would rarely warrant the expense. Still, it might be useful in the case of a valuable brood mare, and after what he had just seen he should not hesitate to advise a client to have this operation performed in the case of a good animal. He would like to hear more about the results of the operation on wind-suckers only. He had seen many cases of wind-suckers that carried out the action without any movement whatever of the lips, and if they were not calling certain groups of muscles into play it seemed doubtful whether such an operation would be successful. It was generally understood that crib-biting was more common in army horses than in those employed in civil life, and it would be interesting to know why that was so.

Mr. Gooch said he saw this operation performed by Professor Mitchell, who dissected further up towards the larynx and took out a much larger piece of muscle than Major Townsend had done.

Mr. Palmer asked how long it was necessary to leave the sutures in.

Mr. DeVine said he had witnessed a good many operations performed at the quarterly gatherings of the Division and for varied surgical conditions, but he had never seen anything more skilfully done than the operation on a crib-biter that afternoon. He should follow with interest the progress which the wound made.

Mr. Parsons asked if it was easy to detect later on that an animal had been operated on for crib-biting.

Mr. H. W. Dawes stated that he was very much interested in the case of secondary hæmorrhage mentioned by Major Townsend after the use of adrenalin. He would like to hear more about the possibility of its occurrence which, in a wound of that description, might be very troublesome. To what extent was secondary hæmorrhage met with and what particular steps would Major Townsend recommend be adopted when it occurred ? He agreed that from a commercial point of view the operation would not be popular, and it was doubtful whether it would be warranted at all on economic grounds. The manner in which the operation was performed showed Major

Townsend to be a master of surgical anatomy and his technique was something they could all admire.

Mr. ASTON asked whether, when the operator had cut the fascia and then separated the sterno-maxillaris muscle with his hands, it was necessary to take much of the fascia out afterwards.

Mr. TUDOR HUGHES expressed interest in the method of suturing, which would be useful in the case of accidental wounds. He would like to hear something further on the subject of after treatment, especially as to safeguarding the animal from injury in the region of the wound. He had come that day as a student rather than as a critic, which was no doubt true of the others present, and would explain why the discussion had taken the form of a few questions.

Major TOWNSEND, in reply, first returned thanks for the kind way in which his effort had been received. Professor Reynolds referred to horses which wind-sucked by the use of their lips alone, but he (the speaker) contended that it was impossible for a horse to suck wind into the stomach without using the muscles of the larynx. He had seen horses that were mistaken for wind-suckers, because when having fed they played about with their lips on the manger—flapping the upper and lower lips about. He thought that was simply a playful habit. There were, however, many different ways in which a horse could wind-suck. In the army the commonest way was for the animal to grab the edge of the manger or head rope and give a gulp. Another way was for the horse to rest the top incisors on any flat surface and then take a gulp. Such an animal did not always answer to this operation, though he could not say why. He thought wind-sucking, by itself, was simply an extension of crib-biting. The animal began by catching hold of something and when he was stopped he learnt to wind-suck without catching hold of anything at all. He could not explain why wind-sucking was commoner among army horses unless it was that army routine was a contributory cause. He had heard it suggested that it was due to example, but he did not believe that was true, because he had never seen an animal in the next stall to a crib-biter acquire the habit by example.

Answering Mr. Gooch, Major Townsend said he usually took out the muscles right up to the larynx, but he did not think there was any point in taking them out any more forward, as there was a danger of interfering with the structure of the larynx. As to how long the sutures should remain in the wound, as a rule they could be removed about the eighth, ninth or tenth day. The skin wound would have completely healed in nine or ten days, and the drainage tubes might be taken out the day before. He had not found that the operation made any difference to the carriage of the head or to the animal's capacity for jumping. It was, of course, easy to detect a horse that had been operated on in this way, even although the scar was not very visible, as the trachea could be felt immediately under the skin and the severed ends of the sterno-maxillaris muscle were easily noticeable.

He agreed with Mr. Dawes that the danger of secondary hæmorrhage was very important. In civil practice, the animal after the operation was left in the client's care, but in the army there were always men in the stable watching, and if hæmorrhage occurred a veterinary officer would soon be on the spot. In his first few operations he was very frightened of secondary hæmorrhage and he got quite a lot of it. He had to open up the wound and plug it. He got less of it now, because he was very careful to see that there was no hæmorrhage before he closed the wound, and also because he was careful to use his fingers as much as possible to separate the muscles instead of using a knife. If secondary hæmorrhage occurred he advised opening up the lower part of the wound and using a plug. With regard to after-treatment, about half an hour after the operation the animal was put back into the stable. A head collar was put on with no throat band and the horse kept on pillar reins for ten days. This was necessary to prevent him rubbing out the sutures and tubes on the manger. In about three hours a drink of water and a bran mash were given. All else that appeared necessary was to remove any blood clots or discharges round the sutures every day and beyond that the wound seemed to heal better the less it was interfered with. No protective covering of any kind appeared either necessary or advisable.

Votes of thanks. The PRESIDENT, in the name of the Division, thanked Major Townsend for his visit. They had all thoroughly enjoyed his demonstration and his remarks, and even though they might never undertake the operation themselves, it was a good thing to know all about it.

On the further motion of the HON. SECRETARY, seconded by Mr. GOOCH, votes of thanks were accorded to Mr. Banham for providing the animal for the operation; to Mr. DeVine for making the necessary arrangements at Holliday Street, and to the Birmingham Corporation for allowing them the use of the premises.

Councillor PAINTER, a member of the Stables Committee, said the Corporation were only too pleased to assist any society that was engaged in the furtherance of science.

The members then adjourned to the Grand Hotel for tea.

H. J. DAWES, Hon. Secretary.

R.C.V.S. OBITUARY.

MURRAY, James, Cullen, Banffshire. Graduated, N. Edinburgh, 23rd May, 1888. Died, 4th December, 1927.

. . . . . .

Mr. JAMES HUGHES, DOWNPATRICK.

"The death occurred on Saturday at his residence, English Street, Downpatrick, of Mr. James Hughes, M.R.C.V.S.," says the *Irish Telegraph*, of 5th December.

"The deceased was one of the best known professional gentlemen in the district, and his death has occasioned general regret amongst a large circle.

"Mr. Hughes was keenly interested in sport, and was for many years a prominent member of the East Down Harriers.

"A member of the Church of Ireland, Mr. Hughes was a staunch Unionist, and during the War rendered valuable service as Veterinary Officer to the 36th Divisional Signal Company.

"He is survived by one son and one daughter, with whom deep sympathy is extended in the bereavement."

ARMY VETERINARY SERVICE.

LONDON GAZETTE—WAR OFFICE—TERRITORIAL RESERVE OF OFFICERS.

Dec. 6.—Maj. J. Sheffield, from Active List, to be Maj. (Dec. 7).

NOTES AND NEWS.

The Editor will be glad to receive items of professional interest for nclusion in these columns.

Diary of Events.

Dec. 19th—Meeting of the N.V.M.A. Editorial Committee, 4-30 p.m.
,, 22nd—Meeting of the Dumfries and Galloway Division, at Dumfries.
,, 22nd—Meeting of the North Wales Division at Rhyl.
,, 30th—Joint Meeting of the Yorkshire Division N.V.M.A. and Yorkshire Division Society of Medical Officers' of Health, at Wakefield.
1928
Jan. 11th, 12th, and 13th—R.C.V.S. Committee and Council Meetings.

To meet printer's requirements, in consequence of the Christmas holidays, it is requested that all contributions (including correspondence) intended for publication in the issue of *December 31st*, should reach this office not later than first post Friday, December 23rd.

Edinburgh College Grants.

In the House of Commons, recently, Mr. James Stewart (St. Rollox, Lab.) asked the Secretary of State for Scotland if he would issue a statement showing the sums of money allocated to the Edinburgh Veterinary College by the Board of Agriculture for Scotland since the stoppage of the grant to the Glasgow Veterinary College, the amount per annum allocated under the heads of annual grant towards capital expenditure, and the amount allocated in the name of the Animal Diseases Research Association towards finishing and equipping rooms within the College.

Sir John Gilmour: In respect of maintenance grant, the figures were £3,584 for the year 1925—26, and £3,656 for the year 1926—27. For the same years the amounts paid in respect of capital grant were £9,541 and £3,293 respectively, while in the present financial year a sum of £302 has been spent under this head up to date. In addition, a total sum of £1,089 has been expended from capital grants to the Animal Diseases Research Association towards fittings and equipment of the College.

Foot-and-Mouth Disease at Birmingham.

Further cases of foot-and-mouth disease were discovered at Birmingham on Monday morning. Following 12 cases among cattle on Saturday and two on Sunday at the corporation abattoir and wholesale meat market, a case of infection was discovered at the live pig market. A fat beast was found infected at a farm at King's Norton.

An order is now in force making the district within 15 miles' radius an infected area, and requiring licences for the removal of stock therein. The pig market has been closed, and pigs for the Black Country must be slaughtered in Birmingham.

There were 700 beasts at the abattoir and their slaughter was expedited preparatory to a thorough disinfection of the premises.

CORRESPONDENCE.

Letters to the Editor should reach the Office not later than by the first post on Tuesday morning for insertion in following Saturday's issue.
All correspondence must bear the name and address of the contributor for publication.
The Editor does not hold himself responsible for the opinions of his correspondents.

The Obligations of the Ministry of Agriculture as regards the Veterinary Practitioner.

To the Editor of The Veterinary Record.

Sir,—It is all very well for the Ministry of Agriculture and veterinary inspectors—both whole and part-time men—to ask for the support and co-operation of the practitioner, and point out their moral and legal obligations, whilst not one of them has the moral courage to stand up for the practitioner and demand a better fee for services rendered. I consider their attitude selfish. And yet, we are expected to wave the professional flag with *Vis unita fortior* as our motto.

It is not surprising that so few cases of tuberculosis are reported by the practitioners—under the 1925 T.B. Order—when the magnanimous fee of 2s. 6d. is all one receives for it and should there be two cases on the same premises one does not even receive 2s. 6d. for the second one. Such a fee is an insult to any professional man, when one considers the importance of the subject. If the fee were reasonable, say 10s. 6d., no doubt every case which came under one of the three classifications of the T.B. Order would be reported with all practicable speed. The state of affairs in Yorkshire and Glamorganshire referred to by Mr. Rabagliati and Mr. Howard Jones is undoubtedly due to the absurd fee for reporting such cases. There is neither reason or equity in offering such a fee.

I do not suppose there is a single man or woman in the profession to-day who for one moment thought that he or she would be expected to act as a philanthropist in saving children and others from the ravages of tuberculosis, for the vast sum of 2s. 6d. To my mind, the discovery and the reporting of these clinical cases of tuberculosis, or any other disease, is the *most important step* in the whole process of eradication. How can anyone expect to attain the desired results unless all dangerous cases are immediately reported? Owners are reluctant to do so, and comparatively few comply with the Order. Under the present conditions he is entitled to the 2s. 6d., whilst the part-time inspector who examines a herd, and reports a case of tuberculosis, receives—in this county—21s., *plus* a certain amount for mileage. Why should the discovery and the reporting of a case by an inspector be valued at 21s., whilst the same duty performed by the practitioner should be valued at 2s. 6d.? It is ridiculous and unjust; common sense would say that both men should receive the same fee, whatever it is. A re-adjustment of fees by the Ministry of Agriculture is certainly called for, and they should be asked to pay the practitioner a reasonable and respectable fee for reporting cases. If the matter is allowed to continue on these lines, there are going to be two sections in the profession, which must become two opposing forces, and we all know that no undertaking will prove a success under those conditions.

If the Ministries of Agriculture and of Health desire the help and co-operation of the practitioner in stamping out diseases and safe-guarding public health, they should pay an adequate fee for such services. I maintain that the man, whoever he be, who brings the source of danger to the notice of the authorities is performing a far greater and more valuable service than the man who carries out the valuation and *post-mortem* examination.

Our thanks are due to those gentlemen who have recently pointed out in our journals how our profession has been ignored by those in power when matters concerning animal health and industry have been under discussion. It is sincerely to be hoped that they will not allow the matter to drop, but see that the fight is carried on into the enemy's camp.

Practitioners should adopt the same attitude with determination, and take steps to ensure the receipt of a just and adequate remuneration for their share in a work of such national importance. Unless some steps are taken to demand this better recognition we shall remain as we are for ever—the down-trodden under-dogs. If it could only be organised, I suggest the way to deal with the matter would be for all veterinary practitioners in every county who do not hold inspectorships to sign an application for an increased fee for reporting cases under the "Diseases of Animals Act," including the Tuberculosis Order, 1925. I suggest that such a fee be 10s. 6d. The County Councils could not sanction the increase, as the present amount has been fixed by the Ministry of Agriculture; but the application would be forwarded to the proper quarter.

Would it not be possible for one man in every county to volunteer to obtain such signatures? Surely we do not all suffer from apathy. I suggest that at the next meeting of all BRANCH VETERINARY MEDICAL ASSOCIATIONS, a representative of each county should volunteer to do this much for himself and his brother practitioners. If our motto is truly *Vis unita fortior*, every inspector, even, should at least give his moral support. I feel sure that ultimately the country in general would benefit by the quicker removal of diseased animals which are a source of danger to public health, and that the practitioners would be paid an adequate fee for taking the first and most important step in a work of national importance.—Yours truly, H. LLEWELYN JONES.

Veterinary Infirmary,
Denbigh,
December 7th, 1927.

"The Abortoscope Method of Applying the Agglutination Test."

TO THE EDITOR OF THE VETERINARY RECORD.

Sir,—I have read with interest Mr. Bevan's letter on the above subject in which he criticises a sentence in my summary to an article on the results of this method published in your issue dated October 1st.

Mr. Bevan takes exception to the sentence: "Test was wrong in detecting six as reactors," and goes on to point out, what I think is now very well known and recognised, that an animal although infected may give birth to a perfectly normal healthy calf. The wording of this sentence may have conveyed to him the impression that I was ignorant of this fact, although in this same "Summary," I concluded by saying "and that the six which did not abort, *were infected*, and yet went full term." This I think quite covers the matter.

I have ascertained, since the article was written, that these six cows all gave birth to perfectly normal calves, and there was no retention of the afterbirth, but in view of the test results, some have been sold and others kept isolated from healthy stock.

What I consider was the most unsatisfactory result of the test was the fact that it failed to detect eight cows which did abort after the test. As the result of this, other cows, that were not infected at the time, have since become infected and aborted through contact with these eight which were not isolated in view of the test results.—Yours faithfully, J. F. D. TUTT, M.R.C.V.S.

1 St. Cross Road, Winchester.
December 10th, 1927.

The Status of the Profession.

TO THE EDITOR OF THE VETERINARY RECORD.

Sir,—Recent issues of the *Record* have been replete with the views of various correspondents upon our professional status. While one blames one factor, another brands another, but I do not think any writer has reflected the onus upon ourselves. Let us, therefore, be quite honest and admit our own shortcomings. One has only to remember the old adage, "the sins ye do by two and two, ye pay for one by one." Our besetting sins in the past have been laxity and slow development. The public, as a whole, is a sound judge as to the status of any body or calling and so long as we, ourselves, prefer the brand "middle-class" by our functioning and general deportment, so long shall our standing remain such as it is.

Speaking generally, the bare fact of a man becoming a M.R.C.V.S. does not give him the *entrée* to polite society; on the contrary, some assert it has a distinct retarding influence to those whose aspirations lie in that direction, even in this ultra-commercial age.

But if the member is cultured, is a gentleman in the broadest sense and is careful to select his associates—a very important tenet, for a man is known by the company he keeps—in time, he will find his rightful sphere.

All this, however, is individual effort pure and simple.

One cannot help thinking that our body corporate has greatly neglected, in the past, the essentials for our social advancement.

Take, for example, that cumbersome word "veterinary." Is it not quite time that that un-British mouthful was relegated to the limbo of the past, for does it not savour of the back-door of the public house, the blacksmith's shop and the horse coping establishment? If we got rid of that taint, we might relegate that horrible alternative "vet.," too, and appear in the eyes of the public as potential professional men.

What would a doctor say to-day if we addressed him as the *barber* surgeon? And why can't we too drop the word "veterinary" as the medical profession has ostracised "barber." There is very much more in a title than some people think and I submit ours is obsolete now. Then again, look at the stationery of some of our colleagues. One may come across the grotesque figure of a horse rampant and underneath "Tenders given"; "Yearly contracts made"; "Medicines supplied at lowest rates." Talking of "tenders," what is more degrading? and yet the "R.C." is satisfied to leave this point to the *honour* of its members. It is most unfair, for what do we find? Those men who realise the professional fitness of things, decline; while the "commercialist" accepts and gains financially. Some years ago I was professional advisor to an educational body and in course of time I was asked to "tender." My reply was "I am not a tradesman." I saw a member of the committee some time afterwards who explained that they were out for an economy stunt, but stated that, although I had lost this work, my reputation had been enhanced by my refusal. Then again, we, as a body are none too particular in regard to appearances and environment, small matters some will say. Only a few days ago a practitioner lost a client owing to his probing a wound with a dirty instrument and with filthy hands and nails.

Some surgeries and consulting rooms, too, leave an unfavourable impress on visiting clients. Of course I shall be told that to fit their offices up involves outlay, but it is astonishing to find what the paint brush and a little æsthetic taste can do at small cost; and I would point out that a man can always obtain a better fee in artistic than he can in sordid surroundings.

I therefore reiterate: appearances do count and the public are not slow to appreciate them. This reminds me of the tragic condition of things as obtaining to-day in our premier veterinary school. What an impress this derelict institution must have made upon the layman and foreign colleague! It is, therefore, all the more inconceivable to me that a curmudgeon element should have been ventilated recently in the *Record* in questioning the wisdom of the Governors in their recent appointments at this College.

I am not writing this letter in any spirit of antagonism. I am only stating what I consider facts, so that they may help to raise our calling in the eyes of the public and give us our rightful place among the learned professions. If this letter will assist us "to see ourselves as others see us," it will have served its purpose.—I am, sir, yours faithfully,

WM. SCOTT.

The Laboratory,
Friarn House,
Bridgwater.
December 11th, 1927.

P.S.—Since writing this letter, I notice a correspondent discusses veterinary *v.* university training, but I submit that a university training gives a man that *savoir faire* and *savoir vivre* that no other training can and it would be a great day for the profession if all our colleges became affiliated to the other universities.—W.S.

"Where Do We Stand?"

To the Editor of The Veterinary Record.

Sir,—The answer to the above question which has been discussed at some length during the past few weeks in your correspondence columns is: "We do not stand, we lie down." A lot of this is due to lack of co-operation amongst members as a whole, coupled with weak and ineffective leadership from those who might on occasions lodge their objections with the persons responsible, before the objections become "law."

Take, for example, the rates of fees paid in some areas. The reason why so many have to accept them, is the certain knowledge that if they decline there will be no dearth of candidates who will accept them. This should not be. There should be a veterinary surgeon on all Diseases of Animals Committees under the various County Councils, the nomination to be made by the other veterinary surgeons in the county from amongst those who are veterinary inspectors under the Diseases of Animals Acts. It would be interesting to know on how many such Committees there is already a veterinary representative.

I agree with every word that Mr. Wooldridge has said in his admirable letter, and as a public school man myself, I think it perfectly ridiculous to draw invidious distinctions between those who are in this category and those who are not. As a matter of fact, from the educational standpoint, it is a very open question if the public school man receives so good a groundwork in general education as the non-public school man. Scholastic records tend to prove that he does not. From the professional standpoint, the reputation of an individual does not depend on where he was educated, but on how he behaves himself generally, and his skill at his calling. The claim that a public school man comes into contact with influential people, who will help him later, is a mirage. This is often only done when the results are of mutual benefit. This discussion is drawing a red herring across the path of the question that has been raised.

The formation of a Comparative Section to the Royal Society of Medicine has been a great step forward in bringing about co-operation between the medical and veterinary professions. The veterinary profession, from its infancy, has tried too much to follow in the steps of the medical profession rather than to strike out on its own, and yet preserve co-operation.

I am glad to see that one correspondent is with me in advocating the removal of the Royal Veterinary College to better and more up-to-date surroundings, and the recent appointment to posts at this Institution of men with practical knowledge of present-day needs is a step in the right direction. Camden Town is not an ideal place for a College, either from a professional or social standpoint. It was all right in the day of the horse but it is superfluous there and students cannot get the practical groundwork that is given to agricultural students, whose Colleges are almost invariably situated in a suitable district.

The curriculum requires revising, and subjects such as sterility and parasitology should be practically and more extensively taught, preferably by practitioners. This would enable our young men, as Mr. Wooldridge remarks, to specialise.

A subject that requires further attention is that of professional etiquette and the hands of the Registration Committee might usefully be strengthened in this connection. It seems very hard on a person who, getting too friendly after a meeting of Froth Blowers, shall we say, is hauled up and fined, to be later severely dealt with by this Committee and his name erased from the register. Except in the case of incorrigibles, this has often seemed to me too harsh, especially when other far more blatant offences go unpunished, sometimes, of course, because they are kept quiet.

The most effective instrument that we have in fighting for our position professionally, is the National Veterinary Medical Association, which every member should join who has not already done so and future members should do likewise on graduation. With every member included, the Association could draw up rules which would be a *sine qua non* of admittance, breach of these rules to be dealt with by the Association and where affecting "Etiquette" to be referred to the Registration Committee. Members of the profession then could resist the acceptance of small fees with the certain knowledge that they would not be deprived of the posts by others who would accept them.

I do not consider that the position of the profession to-day is so bad as some believe. Its usefulness is becoming recognised. It requires unity within and leadership—a determination to see that its prospective members are taught by practical men of to-day and kept up to the rate of scientific progress.

Grousings in the Press will not help us further. Deeds count more than words. The time honoured cry of *Vis unita fortior* must be a living one and not a cat-call in our Press and a whimpering behind closed doors at a Divisional meeting.

We must stick and fight together in the open and not close the stable door after the horse has bolted. In effect, to use the words of a famous admiral, "Hit first and hit hard."—Yours faithfully, J. F. D. Tutt.

1 St. Cross Road,
Winchester.
December 12th, 1927.

The Royal Veterinary College Appointments.*

To the Editor of The Veterinary Record.

Sir,—With reference to Mr. Buckingham's letter, dated 27th November, I feel that I cannot do better than quote from one of the many letters that I have received on the subject concerning the recent appointments at the R.V.C. The letter is from a member of the profession whom I have never seen or heard of. I will only repeat the first paragraph, which reads as follows:—

> "I have just read your letter in last Saturday's *Record*, and I feel impelled to thank you for the moral courage you have shewn in bringing the matter forward when so many people are doing nothing but talk, talk, talk."

I would like to ask Mr. Buckingham why he should be surprised that my letter should have been published in the *Record*. Is not the *Veterinary Record* the *only* means that the profession possesses of ventilating its views, as it is a breach of veterinary discipline to impart professional information to a Press representative? I read lately that a member of the Medical profession had had his name struck off the Register for this offence.

With reference to Mr. Buckingham's remark: "From a *business* point of view," I would like to say that I did not write from a *business* point of view, but from a *professional* point of view, as I understood that veterinary surgeons had adopted a profession and were not in business.—Yours faithfully, Graham Rees-Mogg.

42 Princes Gate,
S.W.7.
December 10th, 1927.

*[This correspondence must now cease.—Ed.].

The Editor acknowledges the receipt of the following:—

Report of a meeting of the Western Counties' Division, from Mr. R. B. Nelder, Hon. Secretary.

Communications from Mr. D. Buchanan, Dr. T. Cameron, Mr. J. C. Jackson (London), Mr. H. Llewelyn-Jones, Professor R. G. Linton (Edinburgh), Messrs. T. J. Maguire (Co. Fermanagh), A. D. McEwen (Royal Veterinary College), R. H. Smythe (Camborne), and Major R. F. Wall (London).